

a)

```

1 <section>
2 <title> Titanic </title>
5 <section>
6 <title> Leonardo is swimming </title>
9 <section>
10 <title arrow="down"> blub, blub, blub </title>
15 </section>
16 </section>
17 </section>

```

10

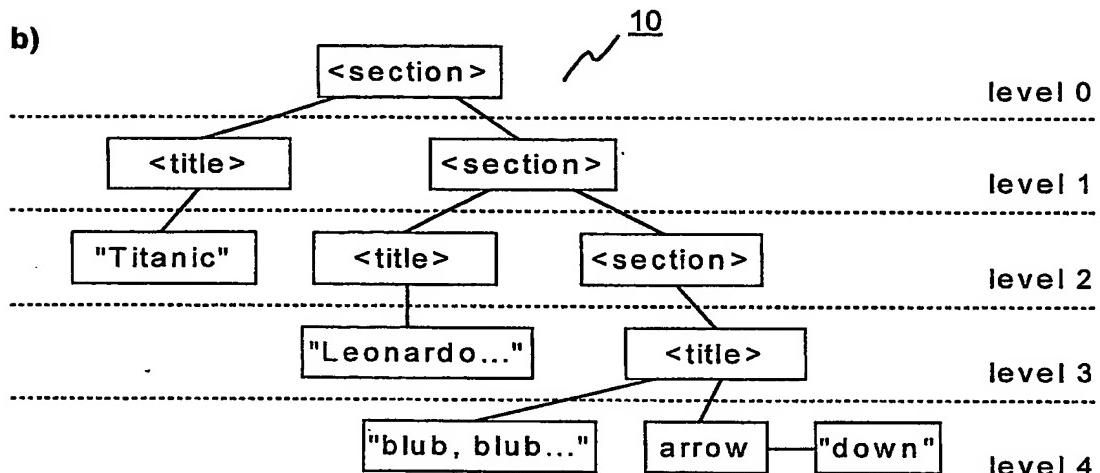


Fig. 1

20

Value	Primary Key		Type	Level
	Descr#	Word Pos.		
<section>	123	1	element	0
<title>	123	2	element	1
Titanic	123	3	Text	2
<section>	123	5	element	1
<title>	123	6	element	2
Leonardo is swimming	123	7	Text	3
<section>	123	9	element	2
<title>	123	10	element	3
arrow	123	11	attribute	4
down	123	12	Text	4
blub, blub, blub	123	13	Text	4

Fig. 2

21

Value	Primary Key		Type	Level	Next Upper Word Pos.
	Descr#	Word Pos.			
<section>	123	1	element	0	1
<title>	123	2	element	1	1
Titanic	123	3	Text	2	2
<section>	123	5	element	1	1
<title>	123	6	element	2	5
Leonardo is swimming	123	7	Text	3	6
<section>	123	9	element	2	5
<title>	123	10	element	3	9
arrow	123	11	attribute	4	10
down	123	12	Text	4	11
blub, blub, blub	123	13	Text	4	10

Fig. 3

a)

```

1 <section>
2 <title> Titanic </title>
5 <section>
6 <title> 5555 Hello 6666 </title>
11 <section>
12 <title arrow="down"> 333 </title>
17 </section>
18 </section>
19 </section>

```

11

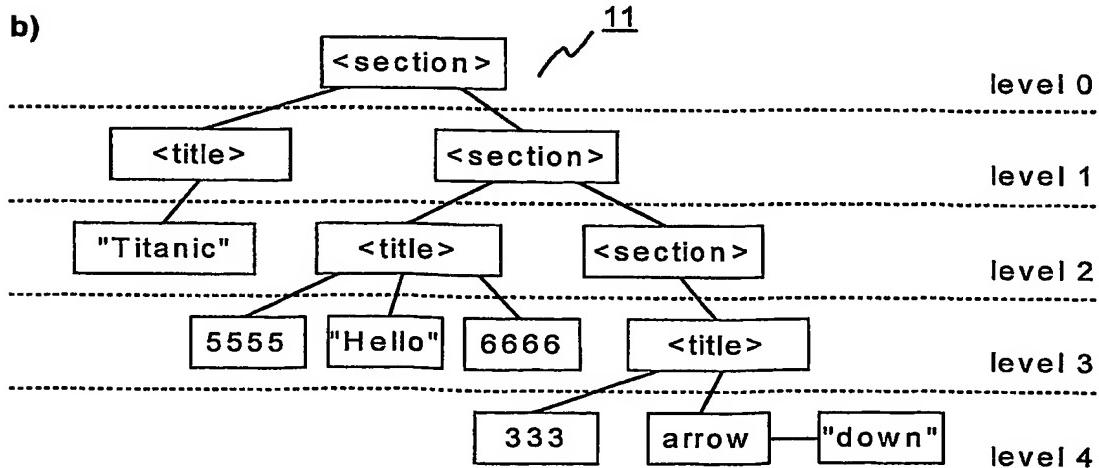


Fig. 4

22

Primary Key			
Element	Descr#	Word Pos.	Level
<section>	123	1	0
<title>	123	2	1
<section>	123	5	1
<title>	123	6	2
<section>	123	11	2
<title>	123	12	3

23

Primary Key			
Attribute	Descr#	Word Pos.	Level
arrow	123	13	4

24

Primary Key			
String Value	Descr#	Word Pos.	Level
Titanic	123	3	2
Hello	123	7	3
down	123	14	4

25

Primary Key			
Integer Value	Descr#	Word Pos.	Level
5555	123	7	2
6666	123	9	3
333	123	15	4

Fig. 5

Primary Key		Secondary Key			
Descr#	Word Pos.	Type	Descr. Key	Level	Next Upper Word Pos.
123	1	Element	1	0	1
123	2	Element	2	1	1
123	3	String	1	2	2
123	5	Element	1	1	1
123	6	Element	2	2	5
123	7	Integer	1	3	6
123	8	String	2	3	6
123	9	Integer	2	3	6
123	11	Element	1	2	5
123	12	Element	2	3	11
123	13	Attribute	1	4	12
123	14	String	3	4	13
123	15	Integer	3	4	12

31	Element	Descr. Key
	section	1
	title	2

33	String Value	Descr. Key
	Titanic	1
	Hello	2
	down	3

34	Integer Value	Descr. Key
	5555	1
	6666	2
	333	3

32	Attribute	Descr. Key
	arrow	1

Fig. 6

```
<MetaDataDescriptor  
1   xmlns="http://www.thmulti.com/MetaDataStream"  
    xmlns:link="http://www.thmulti.com/MetaDataStream/LinkDescriptor"  
    xmlns:log="http://www.thmulti.com/MetaDataStream/LogEntry"  
    xmlns:info="http://www.thmulti.com/MetaDataStream/Info"  
    xmlns:xml="http://www.w3.org/XML/1998/namespace">  
  
<log:LogEntry UUID="351f687f-fdfa-4050-9c59-bb513bc87845"  
2           DateTime="2002-02-06T14:49+01:00"  
3           Action="Create" />  
  
<link:ContentReference>  
4           <link:Link>  
5               <link:LinkingTo>  
6                   <log:LogEntryReference type="UUID"  
                     href="cc80b1fd-e070-48ad-90c8-82ed5d1526da"/>  
                   <link:DvrClpiParameter>  
                     <link:STC_seq>0</link:STC_seq>  
                     <link:PTS>1319433744</link:PTS>  
                   </link:DvrClpiParameter>  
               </link:LinkingTo>  
           </link:Link>  
           <link:Origin>  
             <log:LogEntryReference type="UUID"  
               href="34583cd2-f360-4f0b-b011-885953e20c80" />  
           </link:Origin>  
       </link:ContentReference>  
  
<core:Core-MD  
7           xmlns:core="http://www.thmulti.com/MetaDataStream/CoreMD">  
8           ...  
9       </core>  
</MetaDataDescriptor>
```

Fig. 7

Fig. 8

Descr#	Max Level	UUID	Abs. Pos.
1	5	8aD0sz...	1
5	4	KThz6u...	16
12	8	Pou84s...	59
345	7	U7oksH...	12467

Abs. Pos.	Descr#	Word Pos.	Type	Descr. Key	Level	Name-space	Next Upper Word Pos.
1	1	1	Element	1	0	0	1
2	1	2	Element	2	1	2	1
15	1	15	Namespace	2	1	-	1
16	5	1	Element	1	0	0	1
58	5	43	Namespace	7	1	-	1
59	12	1	Element	1	0	0	1
12467	345	1	Element	1	0	0	1
12628	345	162	Namespace	45	1	-	1

Fig. 9